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Children's Roles in Parents' Diabetes Self-Management

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Abstract

Background—Family support is important in diabetes self-management. However, children as providers of support have received little attention. This study examines the role of children in their **parents'** diabetes self-management, diet, and exercise.

Methods—This research used community-based participatory research principles. Researchers conducted semi-structured parallel interviews of 24 Latino and African-American adults with diabetes and with a child (age 10–17 years) in their home (2004–06). Interviews were transcribed, coded, and analyzed for themes (2004–07).

Results—Adults and children perceived that children play many roles related to **adults'** diabetes self-management. Parents described children as monitoring parents' dietary intake and reminding them what they should **not** be eating. Some children helped with shopping and meal preparation. Families described children reminding parents to exercise and exercising with their parent. Children reminded parents about medications and assisted with tasks such as checking blood sugar. Parents and children perceived that children played a role in tempting parents to stray from their diabetes diet, because children's diets included food that parents desired but tried to avoid.

Conclusion—Children and parents perceived that children have many roles in both supporting and undermining **adults'** diabetes self-management. There is more to learn about the bidirectional relationships between adults and children in this setting and the most beneficial roles children can play. Health-care providers should encourage **family** lifestyle change, strengthen social support for families and direct children toward roles that are beneficial for both parent and child and do not place **an unreasonable level of** responsibility on the child.

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INTRODUCTION

Diabetes self-management, which includes taking medications, monitoring blood glucose, following a diet, and being physically active, takes place within the family context.¹ Increased social support is related to better diabetes self-management.^{2–4} Some self-care such as food preparation may be done by others (often a spouse).⁴ Often forgotten players in this family milieu are children. Research to date has examined the roles of children of parents with severe physical disabilities, cancer, chronic pain and mental illness, but not diabetes.^{5–10} Studies have focused on “youth carers” who are “involved in exaggerated levels or types of caring” and the detrimental effects of extreme caregiving tasks on development.⁵ There is little on the everyday roles that children might play in families in which a parent has a chronic disease such as diabetes and how these roles affect parents and children, nor has research examined children's roles in behavior changes around diet and exercise in these families.

This paper begins to address these gaps by describing parent and child perspectives on children's roles in the self-management of their parents' diabetes among Latino and African-American families. This paper addresses the following study questions:

1. What roles do children and parents perceive that children play in adults' diabetes self-management?
2. What messages do children relay to parents regarding their diabetes self-management?
3. What actions do children take which help or hinder parents' diabetes self-management?
4. How do parents perceive their ability to make changes as being helped or hindered by their children?

METHODS

This research followed community-based participatory research (CBPR) principles that emphasize community involvement throughout the research process, as outlined elsewhere.¹¹ Researchers conducted qualitative, semi-structured parallel interviews of two cohorts of adults with diabetes who were participating in or had completed a successful CBPR-based community-based diabetes self-management intervention—The Racial and Ethnic Approaches to Community Health (REACH) Detroit Partnership— and a child in their home. The 6-month intervention involved 11 weekly, 2-hour self-management training sessions and regular meetings with a “Family Health Advocate” (FHA), a trained community health worker providing self-management education and support. Intervention messages focused on diabetes self-management, healthy diet, and exercise, and participants were successful in decreasing blood glucose and making dietary improvements.¹² The initial group was interviewed after they had completed the intervention, while the second cohort was interviewed before and after at least 6 months of participation. This study was developed in response to community members' concern about community children at risk for diabetes. The primary aim of the interviews was to understand how behavioral changes attempted by adults with diabetes affected the lives of children in the home.^{13,14} What emerged was not only a story of adults' influence on children but of children's messages and actions toward their parents with diabetes. The REACH steering committee and FHAs were involved in the development, discussion, revision and approval of the overall study questions, design, and recruitment protocols.

Sampling

To gather information-rich cases, the study used purposeful sampling, based on the age and sex of the child and race/ethnicity of the family.^{15–17} Researchers purposefully sampled

children, aged 10–17, from REACH families with a goal of at least two children (one male and one female) of each race in each age range (10–11, 12–13, 14–15, 16–17). Inclusion criteria for children were their age (between 10–17 years) and living with a REACH participant for at least one year. Age 10–17 was chosen, as children below age 10 could not meaningfully complete the interview and above 17 are often considered adults. Adult inclusion criteria were completion of 6 months of REACH activities and having an eligible child. Adults and children were required to speak either English or Spanish.

In the first cohort families were recruited in waves to fulfill the sampling framework until all eligible families were contacted. In households with multiple children the framework guided the choice of child. All eligible families in the second cohort were recruited as part of the rolling recruitment for the second REACH program, using the sampling framework to guide selection of children.

Data Collection

All interviews took place from May 2004 to June 2006. We conducted audio-taped, semi-structured, face-to-face interviews with adults and children. Child interviews lasted 50–75 minutes and were conducted in the child's preferred language (English or Spanish) without the adult present. Adult interviews lasted 30–90 minutes. Table 1 lists questions relevant to this analysis. The principal investigator (HL) conducted all English-language interviews. Trained, Masters-level, native Spanish speaking interviewers conducted the Spanish-language interviews. The principal investigator, who speaks Spanish well, was present to add questions if necessary. The study was approved by the Institutional Review Board of the University of Michigan School of Medicine.

Analysis

Interviews were audio-taped, transcribed, and verified. Data were analyzed and collected concurrently so insights from completed interviews could inform ongoing data collection and analysis (Overall spanning May 2004–December 2007). Researchers analyzed the interviews thematically, assisted by QSR NVivo (QSR International, Version 7). Our overall approach followed the “Editing Analysis Style” which contains both deductive and inductive elements.¹⁸ Deductive codes were derived from a priori analysis frameworks and inductive codes were derived from the interviews to create new categories and refine framework categories.

Two investigators independently coded transcripts and used an iterative process to compare results until agreement was reached. Other research team members read selected transcripts to compare their code interpretations with the two primary coders. After the coding scheme was developed, the principal investigator coded all transcripts; a second researcher coded a subset to verify code reliability. Coded transcripts allowed cross-case comparison and analysis of patterns and themes. Additional authors were involved in refining the thematic analysis. Additional details are outlined elsewhere.¹³ Discussion of emerging themes with the FHAs and community partners added additional viewpoints to those of the research team. A community representative from the REACH steering committee and the REACH project manager were a part of the writing team for this manuscript.

RESULTS

The final sample included 24 families (14 in the first cohort and 10 in the second). The adults were primarily female (21 of 24). There were 10 African-American families and 14 Mexican-American families. Participants included 19 parents and 5 grandparents. All grandparents except one were the child's primary caregiver. The other grandparent shared parenting responsibility with the child's mother but was in charge of meal preparation. We use the term

“parent” to denote parent or grandparent. There were 12 male and 12 female children interviewed ranging from 10 to 17 years of age (see Table 2). We enrolled more 12–13-year-olds than initially planned, as we found in early interviews that they expressed themselves more clearly than the younger children but were more dependent on their parents than the older children. The initial REACH intervention cohort had 180 adults (with and without children) of whom 30 families were eligible. Of 30 eligible families approached for enrollment, 15 accepted (one could only complete the child interview), 10 declined and 5 could not be contacted. In the second cohort, of 26 eligible families, 5 were unable to be contacted, 13 accepted and 8 declined (3 did not complete the second interview and were excluded).

Parents and children perceived that children played many different roles in parent diabetes self-management. Families described children's roles in 1) monitoring parents' dietary intake, 2) helping with shopping and meal preparation, 3) reminding parents to exercise, 4) exercising with parents, 5) reminding parents to take medications, and 6) assisting in other diabetes self-management tasks, and 7) tempting adults to stray from their diet for diabetes. These descriptions arose as parents and children discussed changes in the household as parents engaged in a diabetes self-management program. Parents provided more descriptions of children's roles, but some children echoed the same themes. These roles are described in more detail below, followed by parents' overall perspective on how children influenced their diabetes self-management. Bolding in the quotes in the text and tables was added for emphasis by the authors to highlight key phrases.

1. Monitoring Parents' Diet [Table 3]

Many parents perceived that children sometimes monitored parents' food intake. As one mother related her 13 year old daughter's word, “Are you sure you can eat that? Well, Mom, if you cannot eat that, don't do it!” (quote 1- full quote in table 3). Children gave parents verbal reminders about food they should not eat (quote 2) and a couple of children went beyond verbal reminders to hide or take away forbidden food from their parent with diabetes (quote 3).

Parents responded to their children's monitoring in a variety of ways. Parents generally described reminders as positive examples of their children trying to help them. One mother reported, “So they *keep me in touch* with like ‘Mama, you know you can't have that’” (also quote 4). However, parents sometimes ignored, circumvented, or dismissed their children's attempts to “help” or “take care” of them. One parent implied that her actions differ depending on whether her children are present (quote 5). Another parent simply ignored the reminders (quote 6). Parents described some arguments with their children over reminders not to eat certain foods. One father described a conflict with his daughter that he later regretted (quote 7).

2. Helping with Shopping and Food Preparation [Table 4]

Parents infrequently described their children providing instrumental help with diet to them. A few older daughters were described as helping to cook new foods (quote 8). A few older children helped with the shopping, and younger children helped by carrying groceries. One adult-child pair described how shopping for healthier food became a positive joint activity between parent and child (quote 9).

3. Reminding Parents to Exercise [Table 5]

Some families described verbal cues to exercise from children. One mother of young children said:

And sometimes the little girl asks me, “Did you exercise already, or when are you going to do it?” I would answer, “No, I have not exercised yet.” And then she adds,

“You have to do it, I don't know why, but you have to do it.” (translation) (see also quote 11)

4. Exercising with Parents [Table 5]

Many families described instances of children exercising with their parent. As one mother said, “She [her daughter] tells me, ‘Let's go and exercise!’” (translation) (see also quote 12). Another pair shows how parents tried to include children in exercise with them (quote 13).

However, other families did not describe exercising together, and one described how while both children reminded her to exercise only the younger one would exercise with her. Some families described barriers to exercising together that included parents' poor health status, winter weather, and dangerous neighborhoods.

5. Reminding Parents to Take Medicines [Table 6]

Some parents described that their children reminded them to take their medicine and check their blood sugars. One mother reported, “You know they'll say stuff to me about ‘Well...did you take your medicine?’” (also quote 14). One father and his 16 year-old daughter described how she helped manage his medication (quote 15).

6. Assisting with Other Diabetes Self-Management Tasks [Table 6]

Some children assisted in completion of diabetes self-management tasks, such as retrieving medicines, glucose meters and supplies; helping draw up insulin; pricking parents' fingers for glucose checks; and in the Latino community, a few children went to appointments with their parent to serve as a translator (quote 16).

7. Tempting Parents to Stray from Their Diet for Diabetes [Table 7]

Children's presence in the house led to circumstances that tempted parents to stray from their “diet”. Children's diets included foods which parents desired but were told to avoid or eat infrequently because of their diabetes. Parents perceived children as directly and indirectly tempting them to eat certain foods. Children directly tempted parents by encouraging their parents to try foods, bringing foods into the house, and eating certain foods in front of their parent. One parent described how her children actively offering her food that she was trying to avoid (quote 17). Sometimes children sent mixed messages. Parents gave examples of children admonishing them not to eat certain foods while eating those same foods in front of them (quote 18).

Indirectly, parents were tempted by the foods they bought—and sometimes prepared—for their children but were supposed to eat only in limit amounts. Children sometimes demanded to eat differently from their parents, but more often the parents did not expect their children to follow the same dietary rules as the parent with diabetes (quote 19).

Children provided different perspectives on the theme of temptation. Some children felt that the dietary rules for their parents did not or should not apply to them because their parents were the ones with diabetes (quote 20). However, some children recognized the problem of temptation for their parents who were trying to make dietary changes (quote 21). A few children went beyond recognition and described themselves and/or were described as changing their eating habits to match their parents' healthier dietary rules in order not to tempt him or her. For example, a sixteen year old daughter described agreeing to make diet changes in order to help her mother while a father-daughter pair explained how everyone eventually made changes together to help the father (quotes 22 and 23).

Perceived Influence of Children on Parents' Efforts to Make Healthy Behavioral Changes [Table 8]

To understand better how adults perceived children as affecting their overall ability to make change, interviews for the second cohort specifically asked parents if having children made it easier or harder to control their diet and how.

Parents' responses included those who felt it was harder to have children, those who were neutral about it, and those who felt it was easier. Those who felt it was harder cited the need to provide children with different foods from those they ate for their diabetes because children had different tastes and they were growing. Those who were neutral said it was not harder either because they were accustomed to making separate food for their children or because their children ate whatever they prepared. Those who felt having children facilitated their efforts to make changes cited reminders, instrumental help and motivation from their children to make changes (see Table 8 for illustrative quotes).

Discussion

Adults and children in this study perceived that children play many roles related to the self-management of adults' diabetes. Parents describe children as monitoring their parents' intake and reminding them what they should **not** be eating. Parents and children perceived that children played a role in tempting parents to stray from their diet for diabetes because children's diets included food that parents desired but were trying to avoid. A few children helped with shopping and meal preparation. Some families described children as reminding parents to exercise and exercising with their parent. Children also reminded parents about medications and assisted with diabetes tasks such as preparing insulin and checking blood sugar.

Children's roles in adults' diabetes self-management can be viewed from two different perspectives, the potential influence on parents and on children. From the parental perspective, prior research has not addressed how non-adult children in the household may affect the health behaviors and self-management of their parent(s) with diabetes. Family-focused support interventions have concentrated on children with illness and the elderly, leaving out the experiences of adults in their child-bearing years.¹⁹ The experiences of families with children will become increasingly relevant as the age of onset of type 2 diabetes is decreasing²⁰ and the number of grandparents who rear their grandchildren is increasing, particularly in racial/ethnic minority communities.²¹ This paper highlights some of the ways in which children became a part of their parents' diabetes self-management.

Children have the potential to be both a positive and negative part of parents' social support. The social support literature documents that diabetes self-management and diet change can be enhanced by positive social support, but does not separate out support from different family members (e.g. children versus spouses).^{3,4,22-25} In this study parents were for the most part positive about their children's involvement in providing reminders about diet, exercise, and medications. However, the literature on support from adult family members suggests that "helpful comments"—especially those with a negative message—can be seen as harassing or "nagging".^{26,27} As is the case for other family members and health care professionals, it is likely that the manner in which children seek to influence their parents (e.g., through positive, autonomy-supportive reinforcement vs. controlling, guilt-inducing scolding) significantly influences whether these efforts have a positive or negative effect.^{26,28-30}

There may also be other negative social influences on illness management.^{4,31} Other studies echo these parents' struggles regarding family members unwilling to make changes, balancing perceived dietary needs of family and diabetes dietary regimens and the problems of temptation.^{4,13,26,30,32} Children may present a particular challenge to parents' efforts to make

healthy changes because in some families children are not expected to participate in dietary changes.¹³

For children, there are potentially positive and negative consequences related to their roles in supporting their parent. Research on parental illness and the parent-child relationship is limited and none focus on diabetes. The literature on youth caregiving has highlighted the potential detriments to children who have taken on significant amounts of caregiving responsibilities for their parent; these include increased somatization, decreased life satisfaction, isolation and limitation of social activities, and maybe depression and anxiety.⁸ The literature also reports some positive outcomes such as a sense of self confidence, increased self-esteem, and enhanced self-efficacy regarding the skills they have acquired in caregiving.^{8,33} Children can benefit from learning to think about the needs of others and being a part of a supportive family unit.^{5,8,34} Helping also provides a positive outlet for children to express their concerns about their parents.⁶

The consequences for children may depend on the scope and context of their roles. The consequences for smaller roles in caregiving and interactions related to food and exercise, which are crucial in diabetes, have not been well-discussed. As Prillentensky highlights, "There is a big difference between a teenager who has little choice about providing intimate care to a parent and one who may be expected to assist more with household chores than some of his peers. Both the quality and quantity of tasks need to be considered."³⁴ Our study found varied levels of child involvement, from occasional reminders not to eat certain foods to helping manage medications. Though some children clearly expressed a desire to help in some way, it is not clear from this data how these children felt about assisting in these tasks or whether they felt responsible for parental outcomes.

The challenge for all diabetes providers (including educators) is how best to help families balance the needs of both parents and children. Providers should strive to marshal support and resources for families to remove the need to rely on children for significant amounts of caregiving.⁵ Children should not be responsible for monitoring adults' self-management or significant care-giving responsibilities that might interfere with normal developmental activities or make them feel responsible for parent outcomes. However, children can be given opportunities to support their parent in age-appropriate ways.^{8,35} For example, with guidance an older child might be in charge of creating a healthy dinner or gathering the supplies for a blood sugar check while a young child might wash vegetables or retrieve a specific item for a tired parent. Providers can assist these efforts by helping parents carefully evaluate appropriate ways for children to help⁷ but further research is needed to guide parents and providers (see below). Also, diabetes interventions could aid parents in providing information to children about their parent's illness, important healthy lifestyle changes, and their role in these changes.^{26,29,33}

Children can be encouraged to play a positive family role by changing their own health behaviors. This benefits parents by providing a supportive environment for behavior changes and may benefit children by enhancing children's motivation to improve their own eating habits and exercise.^{13,14,36} Perceptive teens in this study picked up on their parents' struggles and concluded that by changing what they ate, at least in front of their parent, they could reduce temptations for their parents. A pilot intervention with Mexican-Americans showed that involving the entire family including the children in activities on communication, diabetes and dietary and exercise change was beneficial to adults with diabetes.³⁷ Providers and interventions should encourage beneficial change for the whole family, joint learning about diabetes, healthy diet and exercise, and opportunities for joint exercise and family meals.^{1,23,30,37,38}

Further research should explore in more detail child-parent interactions in these families and their consequences for parents and children. Additional research questions should explore 1) the frequency of different roles in a larger sample 2) children's feelings of responsibility for helping in diabetes self-management and about their roles, 3) appropriate roles for children and teens to play in adult's diabetes self-management, 4) how to guide children toward roles that are beneficial for parent and child 5) parents' feelings toward and responses to messages from their children in comparison to similar messages from spouses or friends and 6) the types of support from children that parents find helpful and not helpful. This information will help tailor interventions to parents with diabetes to promote a positive, supportive family environment.

Additionally, research should explore the influence of gender and race/ethnicity in defining children's roles. Women predominate among adult caregivers, and in our study parents' descriptions of instrumental help from children often focused on daughters while verbal reminders came from both sons and daughters.^{39–41} Many Mexican-American families value traditional gender roles^{42,43} and place family needs above individual needs.⁴² Many African-American households have a tradition of strong female caregivers who may care for an extended family network.^{32,44} How these cultural influences may have shaped children's roles in these families, particularly female teenagers, needs more study.

The use of CBPR methods enhanced this work in many ways. It informed the questions asked and the methods used to gather and analyze the information. Without the sanction and help of community collaborators, some families would have been unlikely to talk with interviewers and to share so openly. However, although families were assured that intervention personnel would only see themes and carefully de-identified quotes, the interviewers' affiliation with REACH Detroit may have added to the social desirability of their answers. However, as they became comfortable in the interviews, most participants seemed to openly describe challenges, conflict, and other items. In addition, the information gathered in this study has been shared with community and other partners to inform future versions of this intervention.

Several other limitations should be considered when interpreting these results. First, our findings are based on a small group of African-American and Latino families living in inner-city neighborhoods and thus are most applicable to groups with similar characteristics. Second, though our sample spanned the spectrum of ages 10–17 years, our over-sampling of 12–13-year-olds provided greater breadth and understanding of this group and thus our findings may be particularly applicable to this group. Third, the overall focus of these interviews was on describing changes in these households around diet, exercise and diabetes and did not include structured questions exploring children's feelings regarding their roles in their parent's diabetes management.

Conclusion

Children and parents perceived that children have many roles in adults' diabetes self-management. These roles could have positive and negative influences on both parent and child. There is still more to be learned about the bi-directional relationships between adults and children in this setting and the most beneficial roles children can play. Health-care providers and interventions should encourage **family** lifestyle change, strengthen social support for these families, incorporate children where appropriate and direct children towards roles that are beneficial for both parent and child and do not place an unreasonable level of responsibility on the child.

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Table 1**Sample of Questions from the Semi-structured Interview Guides***Adult interviews*

1. Describe dinner last night? [Probes: Who was there? Did you all eat together? What did you eat? How did it compare to a usual dinner? Why are your meals set up like they are? Does the person cooking make the same meal for everyone in the family?]
2. Do you do anything special when making the children's dinner?
3. What was life like before you had diabetes? How has your diabetes changed how you take care of your health? What are the most important changes you have made? What things have helped you make those changes? What things have made it harder? Where do the children fit in?
4. How, if at all, has REACH changed how you take care of your health? How do the children fit in?
5. How have these changes in your life changed the lives of your children?
6. How much control/influence do you have over what your children eat? [Probes: What ways do you use to take control? What things make that harder? What makes it easier?]
7. What are the problems you face in trying to provide a healthy diet to your kids? What has helped you provide a healthy diet to your kids?
8. How active are your children [running, bicycling, playing sports]?
9. What do you tell your children about being active?
10. What problems do you face in providing ways for your child to be active? What makes it easier?
11. What do you think your children know about diabetes? What have you told them about diabetes? Why? How did they respond?
- ¹² How does having children in the house make it harder or easier to follow a healthy diet (control your diabetes)?
a

Child interviews

1. Tell me about your day yesterday? Tell me about a school day? [What do you do after school?] Tell me about last Saturday. [What do you do on weekends?] [probes: Who does these activities with you?]
2. Have you changed your activities recently or in the past? [When? How? Why?]
3. Describe dinner last night? [Probes: Who was there? Who made dinner? What did you eat? What did everyone else eat?]
4. Who decides what is for dinner? [Probes: Do you get a say in what's for dinner? Why/Why not? Who does the grocery shopping? Do you ask for food you want? Why/why not? Does everybody eat the same thing?]
5. Describe the last discussion you had with your parent regarding food?
6. Have you changed the way you eat recently or in the past? [When? How? Why?]
7. Have other people in the family changed how they eat? [How?]
8. How does the diabetes affect your _____'s life? How do they treat their diabetes?
9. How is your life different because you have someone in your house who has diabetes? What was life like before your _____ got diabetes? **What** changed in your day to day life since your _____ found out s/he has diabetes?
10. How do you feel about these changes? What are the good things about these changes? Why? What are the bad things? Why?
11. If going along with changes, Why? If not, Why not?

^aThis question was added to the interview guide for the second intervention cohort after analysis of the first cohort interviews revealed themes around children's influence on adults' diabetes self-management.

Table 2

Characteristics of Families Interviewed

Category	Range (mean) or Number
<u>Families</u>	
African American	10 families
Latino	14 families
# of children	1-5 children (2.3)
<u>Total Yearly Family Income</u>	\$5-10,000 to 35-39,000
<u>Children</u>	
Age	
10-11 year olds	3 children
12-13 year olds	13 children
14-15 year olds	3 children
16-17 year olds	5 children
Male	12 children
Female	12 children
<u>Adults</u>	
Male	3
Female	21
Age	38- 67 (50) years

Table 3

Monitoring Parents' Diet

Children gave parents' verbal reminders about food they should not eat

- A mother regarding her 13-year-old daughter:

When she sees me eating, she asks me, "Can you eat that?" And sometimes when I am eating things I should not ..., I say to her, "Yes honey, it doesn't have a lot of fat." Then she adds, "Are you sure you can eat that? Well, Mom, if you cannot eat that, don't do it! You know you have diabetes." Even the youngest one sometimes warns me too." (translation from Spanish) (Quote 1)

- A father described the vigilance of his 16-year-old daughter about his diet:

My daughter accompanies me to the doctor. She is the one who is attentive and tells me, "No, not this or that. No more of this." And she comes here and makes sure I eat only what I am supposed to eat." (translation) (Quote 2)

Children hide or take away food from their parent

- *Parent:* My family support me. They looking out for me. As long as they fix my food, I ain't gonna worry about it... every once in a while, I'm going to cheat. If it's in the house, I'm going to eat it. But they **hide stuff from me**, and my daughter good at it.

16-year-old daughter: My daddy, he eating a lot of turkey because he can't have beef so he trying to still get some but **we just hides it from him**—so, like with the chocolate. He has a big old bar about this big. He ate half of it, so he told me to hide it, so I hid it all the way up in the cabinet... He couldn't find it.... He was like, "Where my candy at?"... "I'm not telling you."... So, he never finds it. (Quote 3)

Parents described reminders as positive examples of their children trying to help them

- They **help** me with everything. They are always telling me, "No, you can't eat this. You can't drink this." (translation) (Quote 4)

One parent implied that her actions differ depending on whether her children are present

- Ah always! "You can't eat that. That is not good for you!" When we go to a party he says, "You're not going to eat cake."... And I tell him, "No, son, I cannot eat 'cake.'" And when he is doing this, **taking care of me**, I only eat a small little piece, but it depends if they are around. (translation) (Quote 5)

Another parent simply ignored the reminders

- They be saying, "You're not supposed to have this, you're not supposed to have that." I say, "Okay," and **then I go get it anyway**. (Quote 6)

Parents described arguments with their children over reminders not to eat certain foods

- She tell me you know you ain't supposed to have it. I tell her "You just like your mama." **Then I gets mad**. I tell her "Just give me my stuff," you know and she'll give it to me. And I got to go back and say I'm sorry later on. (Quote 7)

Table 4**Helping with Shopping and Food Preparation**

A few older daughters were described as helping to cook new foods

• My daughter fixed it [asparagus] for us. I had eaten it before but it wasn't a regular thing on my diet... My husband wouldn't eat it at first, but we kept...my daughter kept pushing it on him... She steamed it and put some kind of cheese on it.... and he liked it. (Quote 8)

How shopping for healthier food became a positive joint activity between parent and child

• *Parent:* She is learning to read portions, what's in it. She is more health conscious of that than me. If I grab something, sometimes she'll say, "Mama, uh uh, that got so and so. Look at this over here and this is what you need." Oh girl, if I make an error she pretty much catches it.... For us to do that grocery shopping the other day, that was a big challenge. It was a good challenge. And so now I guess the rest of the grocery store visits will be down the aisle together....

12-year-old daughter: And I like shopping because I think I opened some eyes for my mom, show her what to look out for and if she looked at something but didn't look at it right, it was fattening, I tell her. (Quote 9)

Table 5

Roles Regarding Exercise

Reminding Parents to Exercise

• *Parent:* And sometimes the little girl asks me, “Did you exercise already, or when are you going to do it?” I would answer, “No, I have not exercised yet.” And then she adds, “You have to do it, I don’t know why, but you have to do it.” (translation) (Quote 10)

• *Parent:* He’s always, “Ma, you want to go walking? You want to do this? You want to lift some weights?...You want to ride the bike?” I say, “You’ve gotta stop.”....He knows I’m trying, but he does what he can to be encouraging. (Quote 11)

Exercising with Parents

• *Parent:* She [her young daughter] starts doing some exercises with me during the summer. We do some walking ...we walk outside in the street. Ah, there’s nothing else in the world that I love most than to go walking. Yes, and then there’s dancing, you know? We are dancing, she and I...We do not have a stereo... but when the television plays a song, then we start dancing, my daughter and I. (translation) (Quote 12)

Parents try to include children in their exercise

• *Parent:* They enjoy getting involved in things...at work, my son is very active.... Yes I think, because I make them do...If I’m like this [active], why aren’t you?... Sometimes I say to my daughter, like last time we went to the doctor,” Ay, why don’t we start walking, because your brother is not here yet [to pick them up]

12-year-old daughter: You might walk around not as much but when you have somebody with you or a friend or your mom it’s more interesting walking around.... Sometimes with my mom or my dad or with friends we run off and we play volleyball, jump rope, run around. [laughs]. (Quote 13)

Table 6**Other Roles in Diabetes Self- Management****Reminding Parents to Take Medicines**

A mother described how her daughter reminds her to go to bed and take her medicine

- Mami, did you remember to take your pill? (Quote 14)

A father and his daughter described how she helped manage his medication

- *Parent:* I am very forgetful....[Name of daughter] always gives me the medicines that I have to take. At night, when I arrive home, "Here is your medicine." (translation)

16 year-old daughter: He forgets to take his dose-- "Oh, I didn't take the morning pills." And I guess it started when I was 13, I started giving them to him, or 14, his medications, and I don't know, it's just he got the habit of it like me getting his pills ready for him in the morning and in the afternoon (Quote 15)

Assisting with other Diabetes Self-Management Tasks

One mother describes help from her 10 year old daughter:

- She is always telling me: "Mami, I'll take the insulin to you". And she prepares the correct amount of insulin that I need.... because at night sometimes I don't see very well the little numbers in the syringe... Now she also tells me: "Mami, check your sugar." She brings me the little machine that I have to check my blood sugar. (translation) (Quote 16)

Table 7

Tempting Parents to Stray from Their Diet for Diabetes

Children actively offered their parent food that she was trying to avoid

- Yesterday he was telling me, "Have a McDonalds, Mama. I'll buy you one." And I say to him I don't want that.... I don't feel like eating one.... Sometimes they [her children] offer me things and I don't even taste them and I say to them, "Don't offer me that, don't give me anything, don't **tempt** me!" [laughs] (Quote 17)

Children admonished their parent not to eat certain foods while eating those same foods in front of them

- I don't like diet coke. And I see that all of them drink regular coke while I have to drink water or diet.... I drink from the cups that still have a little coke left over, and then I hear [from my son], "Leave that alone because that is bad for you".... But, as soon as he [her son] sees the coke and he says, "That is bad for you. Give it to me". And he takes away the coke from me, and **he** drinks it. (Quote 18)

Parents did not expect their children to follow the same dietary rules as the parent with diabetes

- I know the way we supposed to eat is healthy for everyone, but kids do not want that kind of stuff.... You know I hate to keep sending him to bed hungry, so you're like, maybe we have to have the fries and the good stuff tonight, but I be wanting to try different vegetable recipes cause that's what I really need in my system but I just, I mean I can't starve my child to death. (Quote 19)

Some children felt that the dietary rules for their parents did not or should not apply to them because their parents were the ones with diabetes

- She [my daughter] is the one who says to me, "Mami you have to eat well, you know you have to eat well." And then I tell her, "You give me advice but you do not apply it to yourself, because you have to eat well too." And she says to me, "I am young, it doesn't apply to me." (Quote 20)

Some children recognized the problem of temptation for their parents who were trying to make dietary changes

And I see that with my dad like...my sister will get home with some kind of chocolate or something and my mom will go "Don't go to the living room and show your dad." And then he'll come straight in, "I like that. I want that chocolate." (Quote 21)

A few children changed their eating habits to match their parents' healthier dietary rules in order not to tempt him or her

- *Interviewer:* Why are you going along with them [the family diet changes]?

16-year-old daughter: Because of my mommy--Cause, you know, she's got diabetes so I have to live with that so I have to change the way I eat too.

Interviewer: So she's got diabetes, why do you have to change what you eat?

Daughter: Because I want **to support her** with what she going through, you know, her diabetes, I would like **to be there for her**, so I just change the way I eat for her.... because if I sit here, and she's sitting there, and you know, I'm eating something that she can't eat, then I feel bad. (Quote 22)

- *Parent:* Before, they fed me differently, they gave me vegetables to eat and they [my daughters] ate something else. Nowadays, my daughters and I eat vegetables, we all eat this.... The change was for the same reason, because of my diabetes. In other words, they try to help me.

16-year-old daughter: He was having all this other food and he feels badly, "Oh, you guys are eating that and I'm just here with my vegetables." My mom tries to do the same thing for all of us, we don't want him to feel bad... [Eating the same thing] works better. Cause in the beginning, "I don't like this." "Well, just try it." And I would try it and it was all right, and we started getting used to actually eating it so we eat it. (Quote 23)

Table 8

Why Parents Believe Having Children Makes It Harder or Easier to Control Their Diet.

Parents who felt it was more difficult to make changes with children in the home

- *Parent 1*: It is more difficult, because I have to always think, “And now, *what am I going to cook for them?*” (translation)
- *Parent 2*: Well it is more difficult when you have children because ... it is more difficult because they are young, and because they have *different tastes* in food.

Parents who were neutral about the impact of their children on their health behaviors:

- *Parent 3*: You know, it's not really hard cause *whatever I cook, he'll eat it* so it's not hard.
- *Interviewer*: Does he make it any easier?
- *Parent 3*: ... It don't make it any easier either because it's just I cook it and he eat it. It's not like... if it was my older kids, they would say, “I don't want that ma. I don't want this....” But he don't. He eat like us.
- *Parent 4*: No, I don't find that [making separate food for her children] to be a problem, because you have to feed your children. I mean, just a little, but you end up adapting little by little. *You start getting used to the idea* that you have to do it

Parents who felt children made it easier to make healthy changes:

- *Parent 5*: Well, to me it's *probably more easy* because if I ain't have no kids here, I probably won't cook, cause I don't like cooking. I don't like cooking, so my diabetes might be worser because I probably be going to a restaurant and eating some food that I ain't got no business eating.
- *Parent 6*: I think that it is easier because *they help you, they encourage you*. They tell you if they see something wrong, and later they tell you, “That is going to hurt you, mom. Don't do it.” I think that when your kids are informed about everything and they know how to share everything, they can help you and they can support you so that you can keep going ahead. (translation)